MAYOR & COUNCIL AGENDA COVER SHEET

MEETING DATE:

July 24, 2006

CALL TO PODIUM:

Ollie Mumpower
Engineering Services Director

RESPONSIBLE STAFF:

Fred Felton
Ollie Mumpower
Greg Ossont
Cathy Borten

AGENDA ITEM:
(please check one)

	Presentation
	Proclamation/Certificate
	Appointment
	Public Hearing
	Historic District
	Consent Item
	Ordinance
	Resolution
	Policy Discussion
X	Work Session Discussion Item
	Other:

PUBLIC HEARING HISTORY:

(Please complete this section if agenda item is a public hearing)

Introduced	
Advertised	
Hearing Date	
Record Held Open	
Policy Discussion	

TITLE:

Review of a Draft Adequate Facilities Ordinance—Traffic Impact Standards

SUPPORTING BACKGROUND:

Attached please find a draft copy of the Proposed Traffic Impact Study Standards.

These standards were developed after reviewing the traffic APFO's for both Montgomery County and the City of Rockville and incorporating aspects of both into a single document tailored to meet the needs of the City of Gaithersburg.

During the course of the work session, staff will go through the process step by step and answer any questions the Mayor and City Council may have.

DESIRED OUTCOME:

Hear presentation, and provide guidance to staff.

GAITHERSBURG TRAFFIC IMPACT STUDY STANDARDS

Intent

The City of Gaithersburg recognizes the direct correlation between land use decisions and traffic operations. The intent of this document is to permit accurate evaluation of expected impacts of proposed projects.

This document is further intended to help achieve the following objectives:

1. Allow the City of Gaithersburg to assess the effects that a proposed project may have on the community by outlining information needed and evaluation procedures to be used.
2. Provide a standard set of analytic tools and a format for preparing traffic impact studies.
3. Help ensure that traffic operating conditions on streets and intersections will be safe and reasonable after development of a proposed use.
4. Mitigate the negative traffic impacts created by individual developments, by helping to ensure the transportation system can accommodate the expected traffic safely and efficiently.
5. Implement a comprehensive, rather than a piecemeal, approach to determine the impacts of developments.
6. Provide direction to City officials, transportation agencies and developers of the expected impacts of a project.

Definitions

1. Adequacy - Sufficiency to satisfy minimum transportation standards
2. Applicant - Any individual, association, firm, partnership, corporation, government agency, or duly authorized representative submitting a development application
3. Background traffic -
4. Capacity - Maximum number of vehicles that can pass a given point during one hour under prevailing traffic conditions
5. CBD -
6. Congestion standard -
7. Diverted trips -
8. Existing traffic -
9. Final TIS -
10. Intersection Capacity Analysis - Evaluation of existing traffic conditions, background traffic conditions, and of forecast year traffic conditions with the subject development project
11. Intra site -
12. Level of Service - A set of operating conditions describing the ability of a transportation network to handle traffic

13. Non-Auto Facility - Non-motorized networks or systems, including walkways, sidewalks, crosswalks, path, pedestrian plazas, bike lanes, and street shoulders
14. Pass-by Trips - Trips that would have traveled on a street adjacent to the subject development even if it had not be constructed; results in a reduction of new trip attributable to subject development
15. Peak Hour Site Trips - Total number of trips (i.e., inbound plus outbound) generated by the development project during the busiest one-hour peak within the peak periods
16. Peak Period - Typically, peak periods are defined as weekday hours from 7-9 AM and 4-6 PM. When necessary for a particular site, the Traffic & Transportation Division may select to expand the peak periods to include midday weekday or Saturday
17. Preliminary TIS -
18. Queuing analysis -
19. Scoping meeting - Meeting with applicant and City staff to discuss the detailed TIS requirements as they apply to the subject development
20. Standard Traffic Methodology - The methodology used to analyze and evaluate the traffic impacts of development applications
21. Site traffic -
22. Total traffic -
23. Traffic Impact Study -
24. Traffic Control Device - Any sign, signal, marking or device placed or erected for the purpose of regulating, warning, or guiding vehicular traffic and/or pedestrians
25. Transportation Demand Management - General term for strategies that promote alternatives to travel by single occupancy vehicle
26. Trip - A one-way movement
27. Trip generation rates –
28. Trip mitigation -

Applicability

1. A traffic impact study (TIS) shall be required and shall be submitted, as part of each development application, as defined in subsection (7) of this section, by an applicant for any new development or redevelopment application that generates 30 or more total (i.e., existing, new, pass-by, intra site and diverted) weekday trips during the peak hour of the morning (6:00 a.m. to 9:00 a.m.) and/or evening (4:00 p.m. to 7:00 p.m.) peak period of the adjacent roadway traffic.
2. The intent of the 30 trip requirement may not be circumvented through the submission of piecemeal development and permit applications or other approval requests.
3. In certain circumstances, City staff may, in consultation with the applicant, require analysis of traffic conditions during a different or additional peak

period to reflect the location or trip-generation characteristics of the site, existing conditions or background development as generators of traffic.

4. An application will not be considered complete until the applicable traffic study required under paragraph 7 and/or 8 below is submitted and is deemed approved by the City of Gaithersburg.
5. Staff will determine the acceptability of the conclusions and recommendations of a traffic study in consultation with the applicant, and other impacted agencies as part of the review process
6. Any modifications in the TIS identified by staff's review are the responsibility of the applicant, after appropriate oral and/or written notice of the issues identified or change(s) required.
7. As part of the development approval process, an approved preliminary TIS will be required for concept, or sketch plan submissions.
8. An approved final TIS will be required in conjunction with schematic development plans, preliminary plan and/or final site plan submissions, as well as amendment to final site plan, if applicable.
9. An approved preliminary TIS or final TIS are considered valid for a period of two years from date of acceptance. After this time the City of Gaithersburg will determine if a new TIS is be required.
10. If significant changes in the site characteristic occur: such as changes in development size, land use mix, or access configuration the City of Gaithersburg will determine if a new TIS is required notwithstanding the validity period described in paragraph #9.

Scope of Traffic Impact Study

Once it is determined that a TIS is required, a scoping meeting is required to be held with the developer's traffic consultant and the appropriate Gaithersburg staff. It will be the responsibility of the consultant to initiate this meeting. At this meeting the following aspects of the traffic study will be proposed by the applicant and/or provided by staff and agreed upon:

1. Intersections that are to be included in the traffic study -The number of intersections to be included will be based upon the trips generated by the development under consideration. As a general guideline, the following indicates the number of significant signalized intersections from the site in each direction to be included in the traffic study. This is based on the number of peak-hour site trips...

Peak hour trips	Number of signalized intersections in each direction
30-249	1
250-749	2
750-1,249	3
1,250-1,749	4
>1,750	5

2. For large projects, i.e., greater than 750 peak-hour site trips, the number of intersections shall reflect likely future signalized intersections as determined by staff and the applicant:
    a. Staff, in cooperation with the applicant, will use judgment and experience in deciding the significant intersections and links to be studied.
    b. Interchanges will be afforded special considerations, including ramps/termini being treated as signalized intersections.
    c. Staff will consider other factors in reaching a decision regarding the number of intersections to be included in the traffic study, such as:
        i. geographic boundaries; e.g., parks, interstate routes, railroads
        ii. contiguous land under common ownership
        iii. the type of trip generated; e.g., new, diverted, pass-by
        iv. the functional classification of roadways
3. Approved but unbuilt (i.e., background) development.
    a. As a general guideline, background development to be included in the traffic study will be in the same geographic area as the intersections to be studied.
    b. Staging of large background developments beyond the typical time period for a traffic study will be considered on a case-by-case basis.
4. Active trip mitigation programs, or physical improvements not completed, that have been required of other developments included in background traffic.
5. The adequacy of existing turning movement counts and need for additional data.
6. Trip generation rates for the proposed development
7. The directional distribution and assignment of trips generated by the proposed development and developments included as background.
8. Transportation projects fully funded for construction within four years in the County's Capital Improvement Program (CIP), the State's Consolidated Transportation Program (CTP), or in Gaithersburg or Rockville's Capital Improvement Program (CIP) are to be included in the analysis, along with techniques for estimating traffic diversion to major new programmed facilities.
9. Special attention will be given to traffic circulation and/or safety concerns related to site access to public or private facilities with 800 or more seats or which can otherwise accommodate 800 or more people during an event.
10. A feasible range of types of traffic engineering improvements or trip mitigation measures associated with implementing the development
11. The number, size, and use of buildings or types of residential units on the site
12. Queuing analysis, if required
13. A pedestrian and bicycle analysis at all intersections studied to assure safe and efficient pedestrian and bicycle access and circulation to and within the site, including:
    a. pedestrian and/or bicycle counts at intersections

b. pedestrian and bicycle accommodations including location and type of crosswalks, pedestrian signals and push buttons, pedestrian refuges, and ADA-compatible ramps
c. when pedestrian signals are present the timing provided for each crossing is to be provided
d. lead-in sidewalks to the site and connectivity to the local area
e. existing and/or proposed bus stops, shelters and benches, including real time transit information
f. bicycle racks and/or lockers
g. recognition of peak pedestrian and/or bicycle activity periods; e.g., evenings related to restaurants.

General Criteria and Analytical Techniques

The following information is to be used by all applicants to demonstrate the expected impact on intersections of public roadways by the trips generated by the proposed development.

1. Existing traffic requirements -Traffic counts are required for each intersection to be analyzed.
    a. Generally, traffic counts less than one year old when the traffic study is submitted are acceptable.
    b. Traffic counts should not be conducted on a Monday or a Friday, during summer months when public schools are not in session, on federal and/or state and/or county holidays, on the day before or after federal holidays, during the last two weeks of December and the first week of January, or when weather or other conditions have disrupted normal daily traffic.
2. Existing traffic analysis
    a. All intersections will be analyzed using the critical lane volume method as detailed in the latest edition of the Local Area Transportation Review guidelines of the Maryland–National Capital Park and Planning Commission (M-NCPPC)
    b. In certain circumstances other methodologies, including the Highway Capacity Manual (HCM), may be required to identify operational problems.
    c. If requested, link analyses will be performed using HCM procedures.
    d. For analysis of freeways and interchanges, including merge, diverge and weaving areas, the HCM will be used.
3. Background traffic
    a. Must include all developments approved and not yet built prior to the submission of an application. City staff will provide a list of locations within the city limits. It will be the applicant's responsibility to obtain this information for locations outside the city limits.

b. In addition staff may require that applications in the immediate vicinity of the subject application and filed simultaneously or within the same time frame be included in background traffic, even if these developments have not yet been approved.
c. Growth in existing traffic is described as a factor representative of travel growth outside the study area. This factor should be applied to the existing through traffic, and appropriate turning movements, before approved development traffic is applied. The volume should be compounded to the reasonable build out years, typically 3-10 years, depending on the build out schedule. For developments with a build out of less than 3 years, growth in existing traffic need not be applied.

4. Background traffic analysis
    a. This analysis should take into consideration all transportation improvements expected to be in place within the study area. These improvements should include those which are already programmed or bonded by the State, County, the City of Gaithersburg, the City of Rockville or developer(s). These improvements should be documented in the TIS.
5. Site generated traffic - is described as traffic which will be generated by the development.
    a. Site traffic estimation should include the following:
        i. Trip generation - the number of trips shall be calculated using the following sources:
            1. For general office, general retail, residential, fast food restaurant, private school, child day-care center, automobile filling station, senior/elderly housing, or mini warehouse, use the formulas provided the latest edition of the Local Area Transportation Review guidelines of the Maryland–National Capital Park and Planning Commission (M-NCPPC)
            2. For other land uses, use the latest edition of the *Trip Generation Report* published by the Institute of Transportation Engineers (ITE).
            3. For some land uses of a specialized nature, appropriate published trip-generation rates may not be available. In such cases, City staff may request that determination of rates for these land uses be a part of the traffic study. If special rates are to be used, staff must approve them prior to submission of the traffic study.
        ii. Trip reduction
            1. Total trip generation may be reduced by considering significant on-site existing land use activities that are to be eliminated via redevelopment. Such reductions may be incorporated into the total generated traffic

volume. To be eligible for this reduction, the existing land use must be active at the time that traffic counts are performed in the area.

2. Potential reductions in trip generation for pass-by and/or intra site trips should also be computed at this stage in the Automobile Traffic Analysis.
    a. Pass-By Trip Reduction - For commercial retail development only, the applicant may make reasonable assumptions regarding pass-by traffic, consistent with guidance provided by ITE. Pass-by trips are those that would have otherwise traveled on a street adjacent to the subject development even if the subject development had not been constructed.
        i. Pass-by reductions will be selected after consultation and approval by the City staff.
        ii. Pass-by volumes may be used to reduce the gross generated traffic volume.
        iii. Pass-by percentages may not be used to reduce parking or other on-site requirements.
    b. Intra site Trip Generation Reduction- Reduction in trip generation within mixed-use developments should be computed consistent with guidance provided by ITE.

iii. Trip Distribution - Regional trip tables produced by the M-NCPPC are the preferred source for the distribution of trips. Copies of these tables can be found in the latest edition of the LATR guidelines. City staff may approve or require the applicant to use an alternative methodology as deemed necessary.

iv. Traffic Assignment - Site-generated traffic volumes should be assigned to the roadway network within the traffic study area using the distribution factors previously developed. Assignments should initially be made according to "shortest path" methods. Reassignment using multiple routings to balance traffic flows may be used with the approval of City staff.

6. Site generated traffic analysis – Total traffic
    a. Total traffic is to be calculated after the site traffic is projected.
    b. After total traffic is developed, an analysis of traffic operations, with projected future roadway improvement in place (i.e. improvements addressed in the background analysis), is to be performed.

7. Other Studies - As part of the traffic evaluation it may be necessary to perform additional special studies, as determined by City staff, in order to identify roadway deficiencies not directly evident from the level of service calculations. All studies must be noted in the TIS.
    i. Neighborhood Impact Studies - Special studies may be required if neighborhoods are affected by a proposed development project due to cut-through traffic or other potential impacts.
    ii. Average Daily Traffic (ADT) Study -If existing residential streets are affected by the subject development project, an ADT analysis may be required. Proper methodology will be determined City staff.
    iii. Traffic Calming Study - may be required to determine ways to reduce speeds in the general study area. Proper methodology will be determined by City staff.
    iv. Accident Studies - may be necessary at locations with a history or expectancy of safety problems, as identified by City staff. The applicant will be expected to identify suitable counter-measures to deal with potential safety problems.
    v. Traffic Signal Study
        1. A traffic signal study may be required to determine the need for a traffic signal at access points or other nearby non-signalized locations. Proper methodology will be determined by City staff.
        2. At access points where a traffic signal already exists, the applicant will be responsible for determining all necessary modifications to the existing signal due to site-generated traffic so that it operates in a safe and efficient manner.
        3. Traffic Timing Study – may be required to determine ways to move traffic more efficiently thru a series of traffic signal. Proper methodology will be determined by City staff.
    vi. Turning Lane Study - may be necessary to determine the need and/or adequacy of turning lanes for handling forecasted traffic volumes without interference to adjacent travel lanes. The need for right turn lanes may also be reviewed.
    vii. Interchange Capacity Study - If an interchange capacity study is required, proper methodology will be determined by City staff.
    viii. Other - Other special traffic studies may be necessary in order to address potential traffic problems.

Conclusions/Recommendations

1. After all analysis is completed, all intersections and/or links within the study area resulting in a Level-of-Service worse than the City's congestion standard (LOS=1450) must be identified and improvement(s) recommended.
2. In order to be considered acceptable these improvements must provide sufficient capacity to:
    a. result in a CLV for the total traffic condition that is less than the City congestion standard (LOS=1450), or
    b. mitigate the traffic impact if the calculated CLV in the total traffic condition exceeds the City congestion standard. Mitigation is achieved when the CLV in the total traffic condition with the improvement is equal to or less than the CLV in the background traffic condition without the improvement.
3. Physical road improvements, participation in improvements that would benefit the general transportation study area, trip mitigation agreements, non-automobile transportation amenities, or a combination thereof, may be used to resolve this issue. The City of Gaithersburg may select any or all of these solutions as the required means to achieve this requirement.
    a. Physical improvements:
        i. Any improvements proposed to be done by the developer should include a discussion of the feasibility of construction. The traffic analysis should be detailed enough to confirm the feasibility and establish the cost of proposed mitigating actions and should present the commitment of the applicant to provide these measures as appropriate. Final functional plans for roadway improvements should be submitted at the detailed engineering stage in the development review process.
        ii. any improvement suggested as being implemented by "others" should indicate by whom. If funded by a public agency then a copy of the page from the appropriate document should be included in the report. If funded by another developer, then documentation should likewise be included.
        iii. when development is conditioned upon improvements, those improvements must be bonded and under construction or under contract for construction prior to the issuance of building permits for new development.
    b. Participation in improvements that would benefit the general transportation study area - In some cases it is of benefit to both the developer and a public agency for the developer to participate in transportation projects that would help to improve traffic in the

general study area but may not be required as part of the requirements of a traffic study.

1. To do this the applicant would be required to enter into a legally-binding agreement (or contract) with the appropriate agency that detailed the participation level of the developer as well as the impact to the transportation system that would derive from this agreement.
2. This process could be used in lieu of specific improvements required by the TIS or may be used to mitigate the impact of an intersection where other solutions have failed to improve the intersection sufficiently.

c. Trip mitigation agreements (TMA)
   i. If an applicant enters into a TMA with a public agency to mitigate the impact of all or a part of their site-generated trips, they will be required to do so by entering in to a legally binding agreement (or contract).
   ii. Each traffic mitigation program will be required to operate for at least 12 years once the trip reduction requirements have been met, but, at the discretion of the City, no longer than 15 years.
   iii. The following are examples of the measures that could be included in a TMA:
      1. Subsidizing transit fares to increase ridership on existing or other transit bus routes
      2. Providing the capital and operating costs to add a new bus/transit route, extend an existing bus/transit route, or improve service (frequency or span) on an existing route
      3. Constructing a new park-and-ride facility
      4. Providing funds to increase use of an existing park-and-ride facility
      5. Funding a private shuttle service; e.g., to and from the site to a nearby Metrorail Station or to a park-and-ride facility
      6. Constructing queue-jumper lanes, providing traffic signal pre-emption devices and other techniques to improve bus travel times
      7. Parking management activities
      8. Live-near-your-work programs
   iv. A TMA may require monitoring. If monitoring is required, it shall be done on a quarterly basis at the applicant's expense to ensure compliance with the conditions of the contract. If the goals are not being met, monthly monitoring will be required until such time as the goals are met for three

consecutive months. Staff will work with the applicant to seek additional measures to ensure compliance during periods when the goals are not being met.

v. Up to a 10% (15 % in the CBD) reduction in new peak hour trips may be allowed for a TMA. These reductions are taken after pass-by trip reductions and before any other reductions or credits are applied. Trips are credited against the total trip generation for the site and not at specific intersections unless agreed upon and deemed in the best interests of the City.

vi. However, mitigation will be targeted toward intersections that are impacted by the new development

d. Non-automobile transportation amenities

i. Applicants are encouraged to mitigate transportation impacts and bring their impact level to acceptable levels, by providing non-auto improvements and modifications to the transportation system.

ii. Applicants may receive trip credits only for off site non-auto improvements approved by the City.

iii. Trip credits will generally be applied as mitigation according to the rates outlined in the latest edition of the City of Rockville's Comprehensive Transportation Review Methodology. and may include a combination of facilities, recognizing that certain facilities and programs are more effective in reducing trips than others.

iv. Up to a 10% (15 % in the CBD) reduction in new peak hour trips may be allowed for the non-auto improvements. Generally, these reductions are taken after pass-by trip reductions and before any other reductions or credits are applied. Trips are credited against the total trip generation for the site and not at specific intersections unless agreed upon and deemed in the best interests of the City.

v. Mitigation involving transit facilities must be done in coordination with DPW&T and WMATA, taking into account the effects such facilities may have on operational costs and transit planning.

4. Coordination with Other Jurisdictions - Auto and non-auto improvements that are within the study area(s) of the development but are outside of City boundaries, or are not controlled by the City, will require coordination with other jurisdictions. If commitment is not guaranteed during the development review process, then the Planning Commission and/or Mayor and Council may or may not grant approval for the development, may approve the development with conditions, or may waive the requirement with full and informed consent.